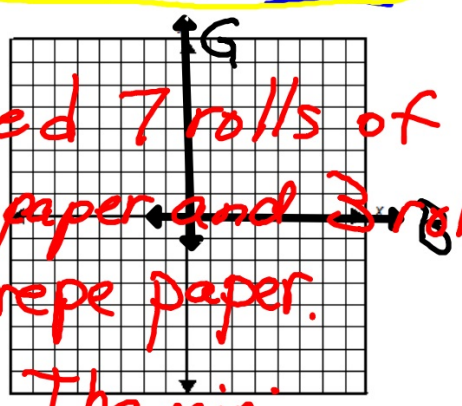
PLEASE SHOW ALL WORK ON GRAPH PAPER

1. You are in charge of decorating the school gym for graduation. You need to buy gold and blue rolls of crepe paper. Gold crepe paper costs $5 per roll and blue crepe paper costs $3 per roll. You will need at least ten rolls of crepe paper. You want no more than 7 rolls of blue and no more than 6 rolls of gold. How many rolls of each color crepe paper should you buy to minimize your cost? What is the minimum cost?

$B \leq 7$

$G \leq 6$

$B+G \geq 10$; $G \geq -B+10$



You will need 7 rolls of blue crepe paper and 3 rolls of gold crepe paper.

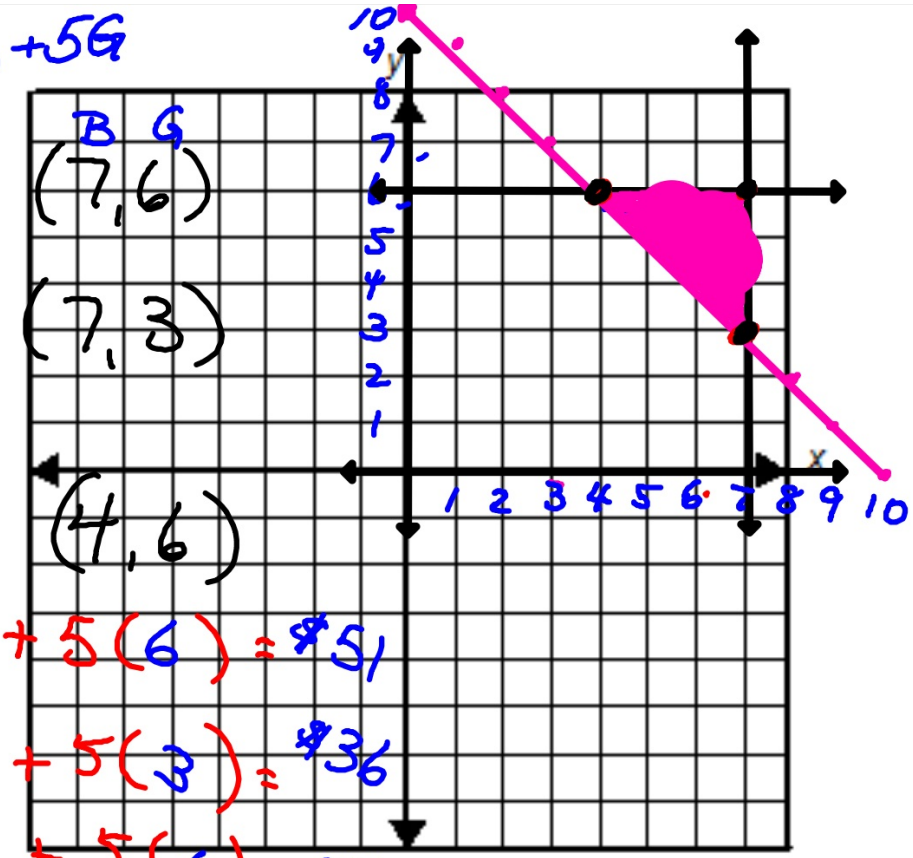
The minimum cost is $36.

$C = 3B + 5G$

$B \leq 7$

$G \leq 6$

$G \geq -B + 10$



B G

(7, 6)

(7, 3)

(4, 6)

$3(7) + 5(6) = \$51$

$3(7) + 5(3) = \$36$

$3(4) + 5(6) = \$42$

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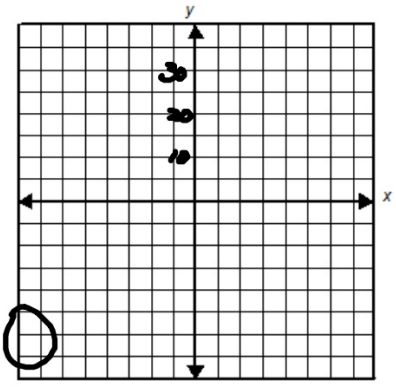
2. A nursery owner has 50 acres for planting carnations and roses. She wants to plant no more than 25 acres of roses and no more than 40 acres of carnations. She makes $800 profit per acre of roses and $1000 per acre of carnations. How many acres of each flower should she grow?

$R \leq 25$

$C \leq 40$

$R + C \leq 50$; $R \leq -C + 50$

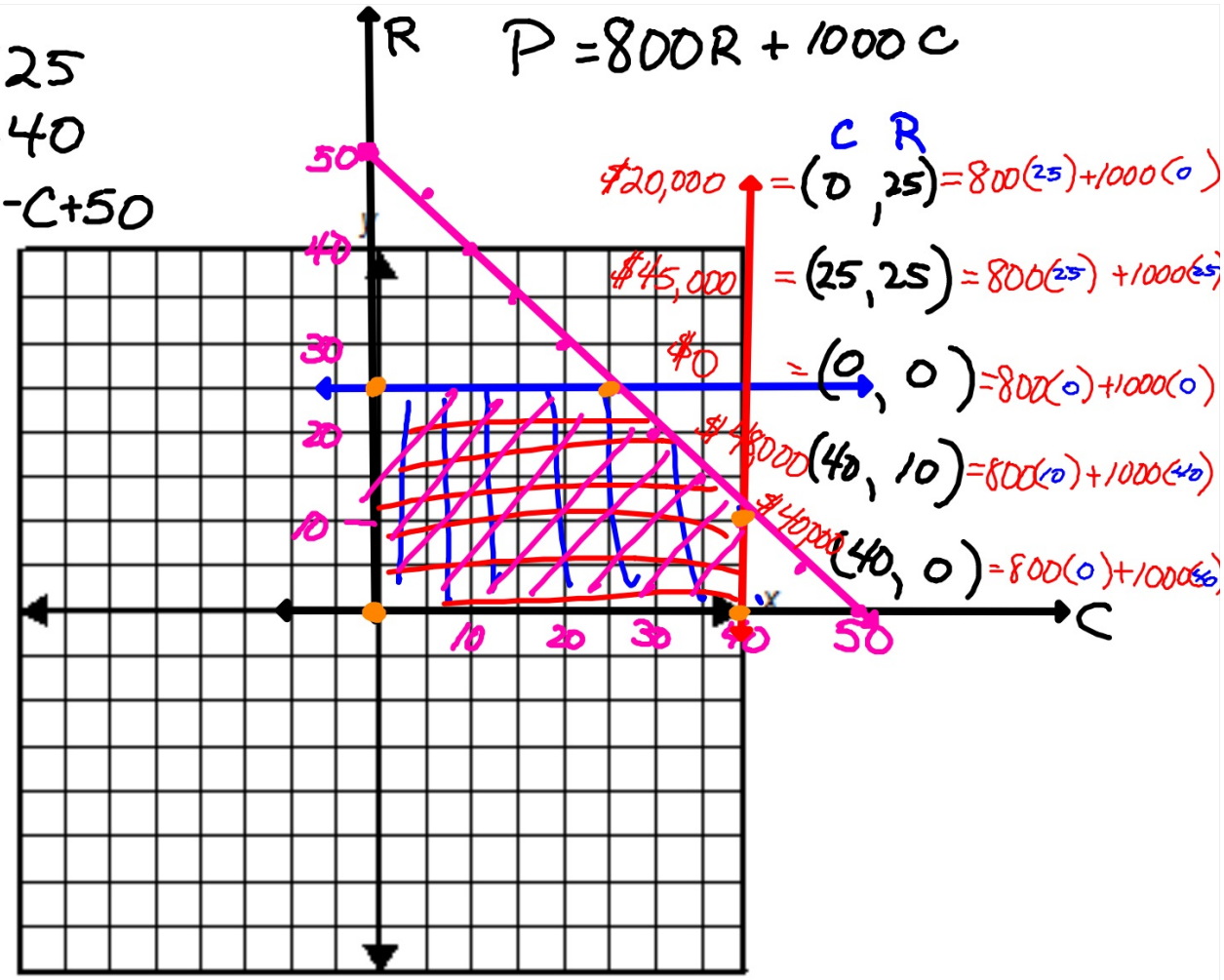


She should plant 40 acres of carnations and 10 acres of roses.

$R \leq 25$

$C \leq 40$

$R \leq -C + 50$



$P = 800R + 1000C$

C	R	
$20,000	(0, 25)	$= 800(25) + 1000(0)$
$45,000	(25, 25)	$= 800(25) + 1000(25)$
$0	(0, 0)	$= 800(0) + 1000(0)$
$48,000	(40, 10)	$= 800(10) + 1000(40)$
$40,000	(40, 0)	$= 800(0) + 1000(40)$

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3. An algebra 2 test consists of computation problems and graphing problems. Computation problems are worth 6 points each and graphing problems are worth 10 points each. You can answer a computation problem in 2 minutes and a graphing problem in 4 minutes. You have forty minutes to take the test and may choose no more than 12 problems to answer. Assuming you answer all attempted problems correctly, how many of each type should you answer to get the highest score?